

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed**1.1. Name of the Data, data collection Project, or data-producing Program:**

NOAA TIFF Image - NF12_PR_7125_bathy_4m.tif - Benthic Habitat Characterization -
NOAA Ship Nancy Foster - M-I907-NF-12 (2012), UTM 20N NAD83

1.2. Summary description of the data:

This image represents a 4 meter resolution bathymetry of a reef shelf/bank and the steep canyons and slopes of the NE Reserve, offshore of Fajardo, Puerto Rico. The M-I907-NF-12 survey was split into two sites: W00221 in the west and W00222 in the east. NOAA's NOS/NCCOS/CCMA Biogeography Team, in collaboration with NOAA vessel Nancy Foster and territory, federal, and private sector partners, acquired multibeam bathymetry data in the Northeast Grand Reserve from 4/08/2012 to 4/20/2012. Data was acquired with a hull-mounted Reson 7125 multibeam echosounder (400 kHz) and processed by a NOAA contractor using CARIS HIPS software. Data has all correctors applied (attitude, sound velocity) and has been reduced to mean lower low water (MLLW) using final approved tides from NOAA COOPS. Data is in UTM zone 20 north, datum NAD83. The bathymetry data were geometrically and radiometrically corrected using Hypack 2012 acquisition software. The project was conducted to meet IHO Order 1 and 2 accuracy standards, dependant on the project area and depth. All users should individually evaluate the suitability of this data according to their own needs and standards.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2012-04-08 to 2012-04-20

1.5. Actual or planned geographic coverage of the data:

W: -65.5776, E: -65.3309, N: 18.5212, S: 18.3818

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
raster digital data

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:**1.8.1. If data are from another observing system, please specify:****2. Point of Contact for this Data Management Plan (author or maintainer)****2.1. Name:**

NCCOS Scientific Data Coordinator

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:**2.4. E-mail address:**

NCCOS.data@noaa.gov

2.5. Phone number:**3. Responsible Party for Data Management**

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

NCCOS Scientific Data Coordinator

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?**4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):****5. Data Lineage and Quality**

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Process Steps:

- 2012-01-01 00:00:00 - For this project, the Chief Scientist was NOAA/NOS/NCCOS/CCMA's Tim Battista and the Lead Hydrographer was independent contractor Mike Stecher. Data was collected aboard the NOAA ship Nancy Foster from 4/08/2012 to 4/20/2012, as project number M-I907-NF-12. Multibeam data was acquired in Simrad .hsx and .7k formats with hull-mounted Reson 7125 and Kongsberg Simrad EM 1002 multibeam echosounders (400 kHz). Simrad backscatter snippet collection was enabled. Line spacing for acquisition was three times the water depth, and data was retained out to 60 degrees from nadir, depending on project area. Heave, roll, pitch and heading correctors were collected using an Applanix POS/MV Model 320 inertial measurement unit (IMU) and associated Trimble GPS antennas. Sound velocity profiles were acquired with a Seabird Electronics SeaCat SBE19P CTD profiler and processed using Seabird Seaterm software. Positioning was obtained using Northstar 941X GPS receivers with differential correctors from U.S. Coast Guard CORS beacon Isabel, Puerto Rico. Data was reduced to Mean Lower-Low Water (MLLW) using final approved tides from NOAA COOPS, based on National Water Level Observation Network (NWLON). | Source Produced: Raw Multibeam Data M-I907-NF-12 (Citation: Raw Multibeam Data M-I907-NF-12)
- 2012-04-01 00:00:00 - Raw .hsx and .all data were converted and processed using CARIS HIPS v7.0 software, resulting in a CARIS HDCS format dataset with all correctors applied. Attitude and SWMB data was cleaned of fliers, and SWMB data was reviewed in subset mode by a NOAA contractor. | Source Produced: M-I907-NF-12 HDCS Processed Multibeam Data (Citation: Raw Multibeam Data M-I907-NF-12)
- 2012-01-01 00:00:00 - After being submitted to CCMA by the contractor, CARIS HIPS v7.1 was used to generate a CARIS BASE surface (similar to a DTM), based on CUBE (Combined Uncertainty and Bathymetry Estimator) from the processed HDCS data. A .BAG file (Bathymetric Attributed Grid) was exported from CARIS using the "BASE Surface to BAG" tool. | Source Produced: M-I907-NF-12 CARIS BASE Surface (Citation: M-I907-NF-12 HDCS Processed Multibeam Data)
- 2012-01-01 00:00:00 - The BAG file was opened in ArcMap 10 and exported as a GeoTIFF at 4m resolution. | Source Produced: NF12_PR_7125_Bathy_4m.tif (Citation: M-I907-NF-12 CARIS BASE Surface)

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.7. Data collection method(s)
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.2. Name of organization of facility providing data access
- 7.2.1. If data hosting service is needed, please indicate
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/38898>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable

information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

<http://coastalscience.noaa.gov/projects/detail?key=263>

7.3. Data access methods or services offered:

Click on link from project page to NCEI archive and download zip file.;

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

National Centers for Coastal Ocean Science - Silver Spring, MD

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.